

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claims 1-9 - canceled.

1 10. (Currently amended) A vibratable aperture plate comprising:
2 a plate body having a top surface, a bottom surface, and a plurality of apertures
3 extending from the top surface to the bottom surface, wherein each aperture is defined by a
4 tapered portion ~~generally conical cavity~~ which tapers inward ~~extends~~ from the bottom surface
5 toward the top surface and a flared portion ~~dome shaped cavity~~ that extends from the top surface
6 toward the bottom surface and that flares away from the tapered portion, and wherein the flared
7 portion ~~dome shaped cavity~~ and the tapered portion ~~conical cavity~~ have the same axis of
8 symmetry such that when a liquid is supplied to the bottom surface and the aperture plate is
9 vibrated, liquid droplets are ejected through the flared portion.

1 11. (Original) An aperture plate as in claim 10, wherein the plate body is
2 constructed from materials selected from a group consisting of palladium, palladium nickel and
3 palladium alloys.

1 12. (Original) An aperture plate as in claim 10, wherein the plate body
2 includes a portion that is dome shaped in geometry.

1 13. (Original) An aperture plate as in claim 10, wherein the plate body has a
2 thickness in the range from about 20 microns to about 70 microns.

1 14. (Original) An aperture plate as in claim 10, wherein the apertures have an
2 exit angle that is in the range from about 41° to about 49°.

Claims 15-30 - canceled.

1 31. (Currently amended) An aperture plate comprising:
2 a plate body having a top surface, a bottom surface, and a plurality of apertures
3 extending from the top surface to the bottom surface, wherein the apertures each include an
4 upper portion and a lower portion, wherein the lower portion extends upwardly from the bottom

5 surface and is generally concave in geometry, and wherein the upper portion is tapered in a
6 direction from the top surface to the bottom surface and ~~intersections~~ intersects with the lower
7 portion which flares outward such that when a liquid is supplied to the top surface and the
8 aperture plate is vibrated, liquid passes through the upper portion and is ejected through the
9 lower portion as liquid droplets.

1 32. (Original) An aperture plate as in claim 31, wherein upper portion has an
2 angle of taper that is in the range from about 30° to about 60° at the intersection with the lower
3 portion, and a diameter that is in the range from about 1 micron to about 10 microns at the
4 intersection with the lower portion.

1 33. (Original) An aperture plate as in claim 32, wherein the lower portion has
2 a diameter at the lower surface that is in the range from about 20 microns to about 200 microns, a
3 height in the range from about 4 microns to about 20 microns.

1 34. (Original) An aperture plate as in claim 31, wherein the bottom surface is
2 adapted to receive a liquid, and wherein the plate body is vibratable to eject liquid droplets from
3 the front surface.

Claim 35 - canceled.

1 36. (Currently amended). An aperture plate as in claim 10, wherein the
2 diameter of the tapered portion ~~conical cavity~~ is at least about 1 micron.

1 37. (Currently amended) An aperture plate as in claim 10, wherein the flared
2 portion ~~dome-shaped cavity~~ has a height that is approximately one-third of the thickness of the
3 plate body.

1 38. (Previously added) An aperture plate as in claim 10, wherein the plate
2 body has a thickness of at least about 20 microns.